

# ARMSTRONG



NSF-372

NSF  $\leq$ 0.25% Lead

## In-Line Circulators (Maintenance free option available)

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Armstrong Series S & H in-line circulators are suitable for applications such as hydronics heating and cooling, domestic water systems, multi-stage zoning and general industrial service. Both models are available in a wide range of sizes to match the performance requirements of any of these applications. Armstrong Series S & H circulators are durable and trusted products that have been used by HVAC professionals for decades. Besides the existing Sleeve bearing design, Armstrong now has introduced the 'Maintenance free' design which has permanently lubricated ball bearings and require no maintenance at all.



► **Design Features**

Armstrong Series S & H in-line circulators are built using a standard three-piece design that features a radially-split body, oversized shaft, centrifugal impeller, sintered silicon carbide seal and modular construction.

► **Body**

The radially-split body can be left in line while servicing the pump, eliminating cumbersome disconnecting of pipes.

► **Oversized Shaft**

Armstrong circulating pumps have an oversized shaft made from either special alloy steel, (sleeve bearing design) or stainless steel ('Maintenance free' design) machined to exacting tolerance. Both shaft designs provide longer life under severe working conditions.

► **Centrifugal Impeller**

The balanced, centrifugal-design impeller ensures maximum water delivery in the HVAC system.

► **Positive Mechanical Seal**

A proven method of preventing water leakage, the well known sintered silicon carbide construction is a frequently imitated feature of the Armstrong circulator. Made from long-lasting hard-wearing materials, it ensures many years of noise-free, trouble-free service.

► **Modular Construction**

Models s-25 through s-57 and H-32 through H-54 feature a unique Armstrong shaft and bearing module which fits all of these models for ease of serviceability and reduced inventory costs.

► **Materials of Construction**

PART NAME		IRON BODY PUMP	
		BRONZE-FITTED CONSTRUCTION	LF BRONZE BODY PUMP*
VOLUTE		Cast iron	Lead free bronze
IMPELLER	S-25 TO S-57	Non-ferrous	
	H-32 TO H-54	Non-ferrous	
	S-69	Brass-stamped	
	H-63 TO H-68	Cast bronze	Cast LF bronze
MECHANICAL SEAL ASSEMBLY		Sintered silicon carbide seal	
BEARING		Sleeve oil lubricated/permanently lubricated	
SHAFT		Alloy steel-copper sleeve/stainless steel	

\* Certified ≤0.25 weighted average percent lead and complies with California Health and Safety Code Section 116875 (commonly known as AB1953).

► **Design Information**

MAX OPERATING CONDITIONS	S-25 TO S-69, H-32, H-41	H-51 TO H-54, H-63 TO H-68
	125 psi at 225°F (862 kPa at 107°C)	175 psi at 225°F (1207 kPa at 107°C)

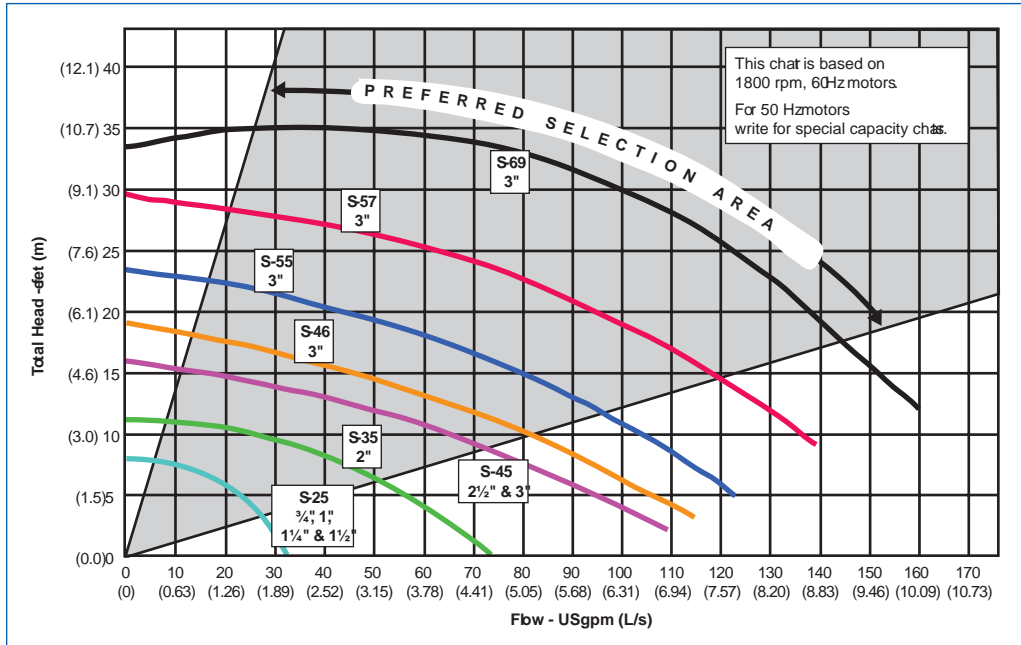
**Notes:**

- 1 All circulators are to be mounted with pump and shaft in horizontal position.
- 2 For domestic hot water or fresh water systems, always specify bronze body pumps or lead free bronze body pumps.
- 3 For temperatures over 225°F (107°C) consult your Armstrong representative.
- 4 Maintenance free S&H circulators are identified by 'MF' in their item numbers.

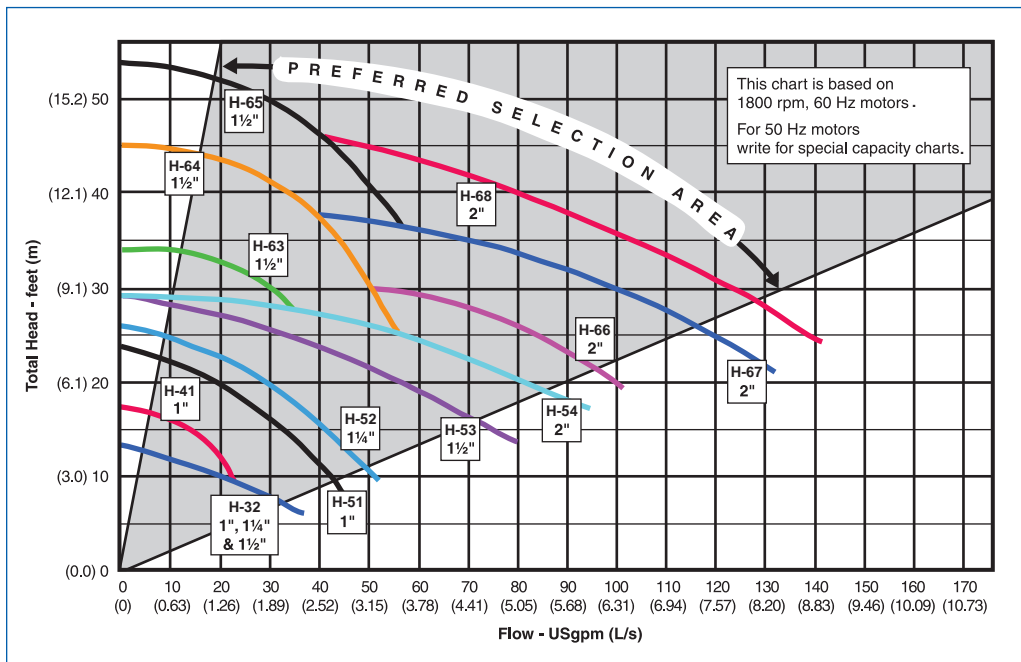
# Series S & H In-Line Circulators

## ► Composite Performance Charts

### ► Series S



### ► Series H



## ► Typical Specification

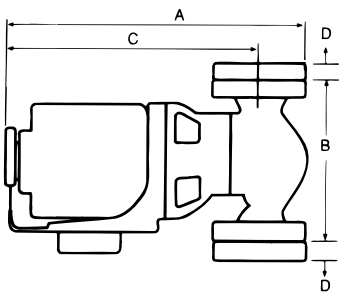
Furnish and install as shown on the plans, Armstrong S or H Series Circulating Pump, designed for quiet operation and guaranteed by the manufacturer for the intended application. The pump shall have a capacity of \_\_\_\_\_ USgpm (L/s), handling (state liquid and temperature) against a total head of \_\_\_\_\_ ft (m). Pump shall be equipped with a \_\_\_\_\_ hp (kW), \_\_\_\_\_ Volt, \_\_\_\_\_ phase, \_\_\_\_\_ Hz, 1800 rpm drip-proof

mounted motor. Pump shall be \_\_\_\_\_ construction, three-piece design featuring the Armstrong shaft and bearing module which shall fit all models s-25 through s-57 and H-32 through H-54. Pump to be equipped with a water-tight, long-life silicon carbide mechanical seal and be suitable for \_\_\_\_\_ psi (kPa) working pressure.

## ► Pump and Motor Data

MODEL	FLANGE SIZE (NPT)	MOTOR		DIMENSIONS INCHES (MM)				SHIPPING WEIGHT LBS (KG)	
		HP	VOLTS & PHASE	A	B	C	D		
S-25	¾	½ <sub>12</sub>	115 Volt 1 phase	13.75 (349)	6.50 (165)	11.50 (292)	0.75 (19)	20 (9)	
	1	½ <sub>12</sub>		13.75 (349)	6.50 (165)	11.50 (292)	0.75 (19)	20 (9)	
	1¼	½ <sub>12</sub>		13.75 (349)	6.50 (165)	11.50 (292)	0.88 (22)	20 (9)	
	1½	½ <sub>12</sub>		13.75 (349)	6.50 (165)	11.50 (292)	0.88 (22)	20 (9)	
S-35	2	⅜		15.00 (381)	8.50 (216)	12.50 (318)	0.88 (22)	35 (16)	
S-45	2½	¼		15.75 (400)	10.00 (254)	12.50 (318)	1.00 (25)	51 (23)	
	3	¼		15.75 (400)	10.00 (254)	12.50 (318)	1.00 (25)	51 (23)	
S-46	3	⅓		15.75 (400)	10.00 (254)	12.50 (318)	1.00 (25)	51 (23)	
S-55	3	½		115/230 Volt 1 phase or 208-230/460 or 575 Volt 3 phase	19.50 (495)	12.00 (305)	16.00 (406)	1.00 (25)	82 (37)
S-57	3	¾			20.00 (508)	12.00 (305)	16.50 (419)	1.00 (25)	85 (39)
S-69	3	1	25.00 (635)		14.25 (362)	20.25 (514)	1.00 (25)	135 (61)	

MODEL	FLANGE SIZE (NPT)	MOTOR		DIMENSIONS INCHES (MM)				SHIPPING WEIGHT LBS (KG)	
		HP	VOLTS & PHASE	A	B	C	D		
H-32	1	⅙	115 Volt 1 phase	15.00 (381)	8.50 (216)	12.50 (318)	0.88 (22)	33 (15)	
	1¼	⅙		15.00 (381)	8.50 (216)	12.50 (318)	0.88 (22)	33 (15)	
	1½	⅙		15.00 (381)	8.50 (216)	12.50 (318)	0.88 (22)	33 (15)	
H-41	1	⅙		15.25 (387)	8.50 (216)	12.50 (318)	0.75 (19)	33 (15)	
H-51	1	¼		17.25 (438)	11.50 (292)	13.50 (343)	0.75 (19)	54 (24)	
H-52	1¼	⅓		17.25 (438)	11.50 (292)	13.50 (343)	0.88 (22)	54 (24)	
H-53	1½	½		115/230 Volt 1 phase or 208-230/460 or 575 Volt 3 phase	20.00 (508)	11.50 (292)	16.50 (419)	0.88 (22)	64 (29)
H-54	2	¾			20.00 (508)	11.50 (292)	16.50 (419)	0.88 (22)	71 (32)
H-63	1½	½			23.00 (584)	13.50 (343)	19.75 (502)	0.88 (22)	96 (44)
H-64	1½	¾			23.00 (584)	13.50 (343)	19.75 (502)	0.88 (22)	100 (45)
H-65	1½	1	23.00 (584)		13.50 (343)	19.75 (502)	0.88 (22)	102 (46)	
H-66	2	¾	23.25 (591)		14.00 (356)	19.75 (502)	0.88 (22)	120 (54)	
H-67	2	1	23.25 (591)		14.00 (356)	19.75 (502)	0.88 (22)	125 (57)	
H-68	2	1½	208-230/460 or 575 Volt 3 phase		21.75 (552)	14.00 (356)	18¼ (464)	0.88 (22)	130 (59)



### Notes:

- 1 Dimensions given are for reference only. For exact dimensional data, contact factory.
- 2 All single-phase motors are equipped with built-in thermal overload protection. Three-phase motors require external overload protection.
- 3 Companion flanges not furnished as standard on S-25, S-45 and H-32.
- 4 For other design characteristics, consult your Armstrong Representative.

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